

REMARKS

Claims 1-20, 26-28, and 31-35 are pending in this application. Claims 21-25, 29-30 were cancelled by prior amendment. Claims 16-17 have been cancelled by this preliminary amendment. Claim 1 has been amended to more clearly set forth the invention as a composition that includes a polyurea-based polymer that is essentially free of segments derived from polysiloxane polyamines. Support for this amendment may be found in the specification at, for example, page 13, lines 4-5. Claim 5 has been amended to correct an inadvertent typographical error. A new claim, claim 38, has been added and includes limitations formerly found in unamended claim 1.

Objections

Claims 1-20, 26-28, and 31-35 have been rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 1 has now been amended to clarify that Applicant's invention provides an adhesive composition that includes a polyurea-based polymer that is essentially free of segments derived from polysiloxane polyamines. In view of this amendment, Applicants assert that the basis for this rejection has been removed and therefore the rejection is moot. Applicants respectfully request that the rejection be withdrawn.

Rejections under 102/103

Claims 1, 2, 4-17, 19, 20, 26-28, 31, and 33-34 have been rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over EP 0 380 236 or Leir et al. (U.S. Patent No. 5,214,119 or U.S. Patent No. 5,461,134).

Claims 1, 2, 4-17, 19, 20, 26-28, and 31-34 stand rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over WO 96/35458.

Claim 1 has been amended to provide an adhesive composition having a polyurea-based polymer that is essentially free of segments derived from polysiloxane polyamines. This polymer, mixed with a relatively low amount of tackifier (less than about 45 wt%) provides an adhesive composition that can exhibit advantages over conventional adhesive chemistries (see,

e.g., page 9, lines 16-24 of the specification), such as improved cohesive strength. Applicants' adhesive compositions require less amounts of tackifier than conventional adhesives, such as pressure sensitive adhesives (see, page 5, lines 8-10 of the specification).

EP 0 380 236 and Leir et al. (U.S. Patent No. 5,214,119 and U.S. Patent No. 5,461,134) are directed to block copolymers having a repeating unit that includes polysiloxane and urea segments. The block copolymers can be prepared by copolymerizing diaminopolysiloxanes with diisocyanates. WO 96/35458 discloses a tackified composition that includes a polydiorganosiloxane polyurea segmented copolymer.

The compositions taught in EP '236, Leir et al., and WO 96/35458 are different from the presently claimed invention because they contain segments derived from polysiloxane. Furthermore, nowhere in the references is it taught or suggested how to provide an adhesive composition having a relatively low amount of tackifier, and a polyurea-based polymer that is essentially free of segments derived from polysiloxane polyamines. Applicants respectfully assert that it would not have been obvious to a skilled artisan, relying on the teachings of EP '236 and Leir et al, to eliminate the presence of polysiloxane and decrease the amount of conventionally known levels of tackifier to achieve an adhesive composition. Adhesives have specific adherence and strength properties that are desirable. Absent the Applicant's teaching, a person of ordinary skill in the art would not have been known nor motivated to change the polyurea-based polymer and the level of tackifier to achieve a useful adhesive. Applicants respectfully assert that the claims are neither anticipated nor obvious over the cited references and therefore request that these rejections be withdrawn.

Claims 1-20, 26-28, and 31-35 have been rejected under 35 U.S.C. 103(a) as obvious over WO 96/35458 in view of WO 98/13135 (understood to mean PCT publication WO 98/42536) or Wright et al. (U.S. Patent No. 6,224,949 B1).

As discussed above, WO 96/35458 relates to a tackified composition including a polydiorganosiloxane polyurea segmented copolymer, and therefore lacks any teaching of using a polymer that is essentially free of segments derived from polysiloxane, as presently claimed. The addition of the secondary references, WO 98/13135 and Wright et al. do not remedy the deficiencies of the primary WO 96/35458 reference. WO 98/13135 is directed to hot-melt adhesive compositions that include a blend of at least one acidic polymer and at least one basic

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polymer. Wright et al. relates to a method of free radical polymerization. Nowhere in any of the secondary references is it taught or suggested that an adhesive composition can be achieved by using a polyurea-based polymer that is essentially free of segments derived from polysiloxane polyamine, and an amount of tackifier of less than about 45 wt%. Accordingly, Applicants assert that it would not have been obvious to one of ordinary skill in the art, in view of the combination of cited references, to provide such an adhesive. Applicants therefore respectfully request that this rejection be withdrawn.

The claims are now in condition for allowance. Early notice to that effect is earnestly solicited. No new matter has been added. The Examiner is invited to contact the undersigned if it would assist in expediting allowance of the claims.

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Attached is a marked-up version of the changes being made by the current amendment.

Respectfully submitted,

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Arlene L. Hornilla
Reg. No. 44,776

Fish & Richardson P.C., P.A.
60 South Sixth Street
Suite 3300
Minneapolis, MN 55402
Telephone: (612) 335-5070
Facsimile: (612) 288-9696

Version with markings to show changes made

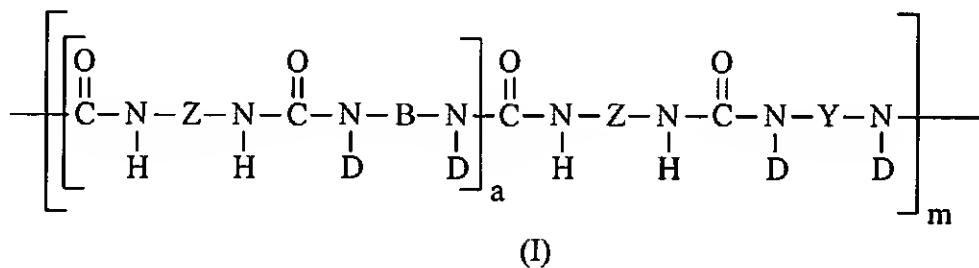
In the claims:

Claims 16-17 have been cancelled.

Claims 1 and 5 have been amended as follows:

1. (Amended) An adhesive composition comprising a polyurea-based polymer[, wherein the polyurea-based polymer does not require greater than] and less than about 45 parts by weight tackifier per hundred parts by weight polyurea-based polymer [to exhibit a peel adhesion of greater than about 10.0 N/dm when tested according to ASTM D 3330-90, where ASTM D 3330-90 is modified by substituting a glass substrate for a stainless steel substrate], wherein the polyurea-based polymer is essentially free of segments derived from polysiloxane polyamines.

5. (Amended) The composition of claim 1, wherein the polyurea-based [co]polymer comprises a segmented copolymer, which copolymer comprises repeating units of Formula I:



wherein:

each B is independently a polyvalent radical;

each D is independently selected from the group consisting of hydrogen, an alkyl group, a cycloalkyl group, a phenyl group, a group that completes a ring structure that includes B to form a heterocycle, and mixtures thereof;

each Z is independently a polyvalent radical;

each Y is independently a polyoxyalkylene;

m is an integer greater than zero; and

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a is zero or an integer greater than zero.

Please add new claim 38.

38. The adhesive composition of claim 1, wherein the polyurea-based polymer has less than about 45 parts by weight tackifier per hundred parts by weight polyurea-based polymer and exhibits a peel adhesion of greater than about 10.0 N/dm when tested according to ASTM D 3330-90, wherein ASTM D 3330-90 is modified by substituting a glass substrate for a stainless steel substrate.